APPENDIX B: KELSO DEPOT DEVELOPMENT CONCEPT PLAN

During the planning process for this general management plan, the public, the local Congressional Representative, and the San Bernardino Board of County Supervisors provided overwhelming support for the restoration of the Kelso Depot. The California Desert Protection Act of 1994 authorized the construction of a visitor center in the preserve. It is proposed that the Kelso Depot be renovated to become a museum and interpretive facility for the preserve. To increase the speed at which this would take place, a development concept plan for the depot has been included in this general management plan. The National Park Service uses a development concept plan to bridge the gap between a general management plan and the preliminary construction and design drawings for a specific geographic area within the NPS boundaries. This is accomplished by providing greater detailed direction on options for development at a particular geographic area. Specific details on building and site functions would be prepared in Title 1 (Preliminary Design or Schematic Design) drawings and documents. The following are several design concepts with options for developing the Kelso Depot into a visitor center.

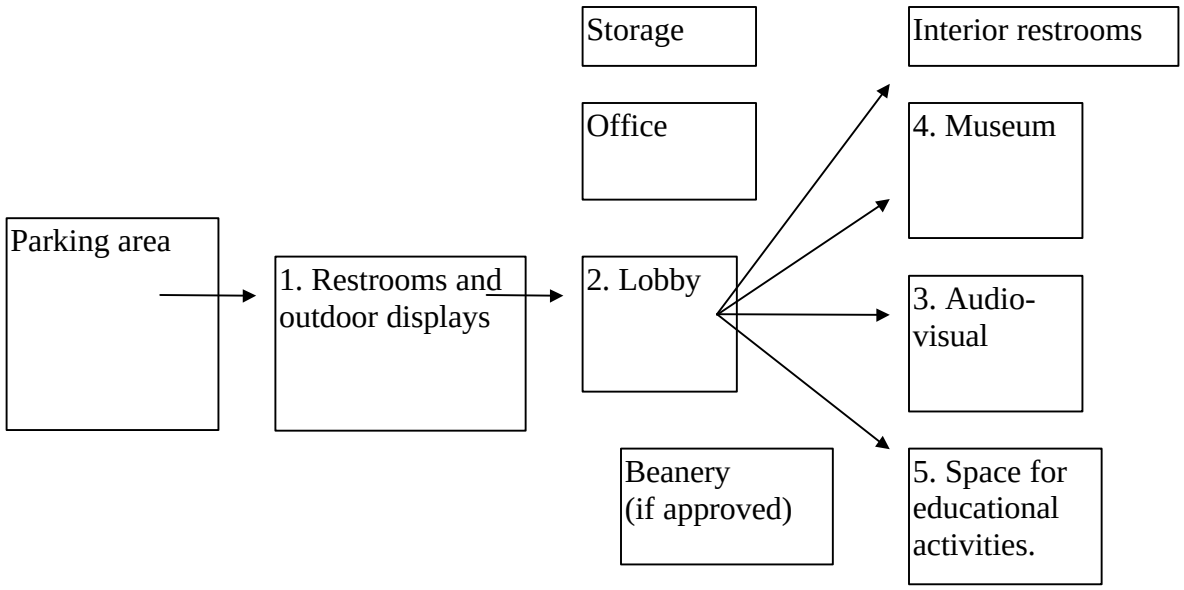
PROPOSED ACTION CONCEPT

See proposed action drawings from pages 234 through 238.

This concept works under the assumption that the Kelso Depot would become a major museum and interpretive facility for the preserve. The visitor center would include a lobby, information space, museum, audio-visual exhibits and space for presentations, public restrooms, publication sales, and storage space. The building would also be modified to provide the following functions: (1) The Beanery would be restored to an operating food service; (2) NPS administrative offices would be established in the depot; (3) Short term lodging for employees or others may be established. (This would only be done if results from the current flood study would allow for overnight use).

SPATIAL RELATIONSHIPS AND PREFERRED FUNCTIONAL SEQUENCE

Visitors would be directed to specified parking lots which would be placed to direct foot traffic past the restrooms (1) which are located near the parking area in a new building to allow for 24-hour use. It is preferred that this building not be attached to the depot to avoid distracting from the historical character. Visitors would then proceed to the lobby (2) where general information is available. Next, interpretation within the audio-visual (3) and museum (4) would be options in the visitor sequence. Special groups associated with educational programs would also be directed to the space for educational activities (5).



The National Park Service would approach owners of property adjacent to the depot to see if they would be willing to sell or donate their property to the government. If the National Park Service acquires this property, it would allow for the construction of such things as visitor parking, walks, information centers and restrooms. The National Park Service would also seek to acquire the historic Kelso School House for preservation and interpretation. Structures must fit in with the cultural landscape.

TRAINS AND VISITORS

The future plan would consider solutions to resolve conflicts and safety concerns relating to pedestrians and trains. Because of the public's high interest in existing train operations, the National Park Service would work with Union Pacific to find a way to keep the public off the tracks while allowing them to observe train operations (see the section on interpretation for more information). Options that would allow rail passengers to unload off of trains and enter the depot would be considered in future design work. The National Park Service would cooperate with the Union Pacific and Amtrak to find solutions to other common objectives and problems.

The Friends of Kelso Depot owns a caboose that is currently located at Kelso. The caboose cannot be directly associated with the depot since it is not from the period of historic significance that the depot would be restored to. The National Park Service would work with Union Pacific to find an appropriate location where the public can appreciate it. After the caboose has been placed, the National Park Service may consider the option of inviting private organizations to assist in the restoration of the caboose.

FLOOD MITIGATION

The gap in the northern dike where the Kelbaker Road currently cuts through would be filled in, at least partially, to increase the level of flood protection for the Kelso Depot and Union Pacific housing area. It is also proposed that the dike be reconstructed as needed to strengthen it and face it where appropriate with a material that would armor it against the damaging effects of floodwaters.
See appendix A "Floodplain Statement of Findings" of this Development Concept Plan for more details.

LANDSCAPING

It is proposed that the historic landscape around the depot be restored to the period of historic significance as much as possible. Site amenities such as the concrete light standards, benches and brick surfaced walks should be restored and placed in their original locations. The brick paved walks would be reconstructed where appropriate. The lawn and trees, which once grew between the building and the tracks, would be reestablished with other plantings that represent the time period of significance. Where possible, plants should be drought tolerant while still retaining the form and appearance of the original landscaping.

The National Park Service would also evaluate the feasibility of reestablishing other historic landscapes around the schoolhouse, general store/post office, and other sites at Kelso to help reestablish the historic feel of the town. The National Park Service could also approach Union Pacific to consider ways in which the view from the depot to the Union Pacific housing area may be improved by reviewing from view those things that may distract from the overall view.

INTERPRETATION AND INFORMATION

A site-specific interpretive plan would consider the substance of the interpretive program, exhibits, displays, and nature of the support facilities at Kelso. Items of historic significance used in interpretation work would not be located where they would be threatened by potential flooding.

An unstaffed information kiosk and a restroom (comfort station) would be located near the proposed parking lot to take care of visitor needs when the depot is not open. The architectural character of these and any other proposed structures must complement the visual character of the historic setting of Kelso but also distinguish themselves from the remaining historic buildings. A unifying design theme must be established to tie the whole proposed development together.

If the National Park Service is able to acquire the historic general store/post office and or school house, it is proposed that these buildings be used for interpretive purposes. The level of historic restoration or treatment of these buildings would be determined after they have been thoroughly evaluated for such things as hazardous materials and structural integrity.

There is strong public interest in the current railroad activities at Kelso. The interpretive plan would consider the possibility of inviting Union Pacific to a partnership in the creation of an outdoor display area that highlights the historic and current railroad operations at Kelso. It is also proposed that this plan consider an elevated viewing platform be constructed east of the depot, north of the tracks and near the proposed parking lot. Its function would be to allow the public to safely observe active railroad operations. An additional fence or some type of barrier would need to be constructed between the depot and the tracks for safety reasons. Attention to location of

these proposed features would be needed to avoid any conflicts with the historic character of the depot and the historic district.

The remains of the historic iron ore loading area that is located south of the tracks and east of the existing Kelbaker Road would be considered for interpretation to the public in the long-term interpretive plan. A roadside pullout would be constructed along with interpretation displays and a potential viewpoint for photographing and interpreting the depot, the town of Kelso, and Vulcan Mine. A length of railroad track may be constructed to help interpret the area

SITE UTILITIES

The National Park Service would construct its own water system since Union Pacific does not wish to be responsible for providing potable water for the depot. The National Park Service would construct its own wastewater treatment system to handle onsite waste. The National Park Service would tie into the existing electrical system and work with the local phone service provider to find a way to improve telephone and data transmission to meet future demands for phone service.

ROADS AND PARKING

The current road system would be slightly changed because of the proposal to partially fill in the dike where Kelbaker Road cuts through it. The direction of traffic flow would remain unchanged from current conditions. The cut in the dike, which the Kelbaker Road now passes through, would be filled in to increase the level of flood protection for the depot. This action would require that the Kelbaker Road to be ramped on each side of the dike to allow for vehicles to drive up and over the dike. A drainage culvert or other appropriate measures would be needed on the north side of the dike to protect the elevated road from floodwaters. To increase the level of safety for pedestrians crossing the Kelso-Cima road to get to the depot, emphasis must be placed on traffic warning signs and other appropriate devices would be installed near pedestrian cross walks to warn drivers of the potential for pedestrians ahead.

Railroad crossing arms would be installed at the existing crossing to aid in the control of traffic when trains are present. The National Park Service would work with Union Pacific to gain funding for the crossing arms.

To avoid creating visual distractions that would reduce the historic setting of the depot, the parking lots and other new facilities would be placed as far away from the depot as reasonably possible. It is recognized that some parking may need to be placed closer to allow access for disabled staff and visitors. It is proposed that the construction of parking be phased. The first action would be to create temporary parking north of the depot that would not be paved but would be clearly defined. If the National Park Service can acquire the right to develop on land located east of the depot, phase 1 parking and a comfort station would be constructed and the temporary parking areas would be eliminated. Phase 2 parking would be built when demand for parking exceeds the capacity of phase 1 parking.

CONCEPT "A"

This concept is the same as proposed action with the following changes (see Concept A drawing).

This concept is developed around the basis that all new development would be on existing NPS property and the existing road system would remain relatively unchanged. If a private property owner wishes to sell property adjacent to the depot at some time in the future, additional parking could be built as explained in other alternatives. All concepts work under the assumption that the Kelso Depot would become a major museum and interpretive facility for the preserve.

ROADS AND PARKING

All road alignments would remain relatively unchanged with the exception of a proposed realignment to tighten the intersection of Kelbaker, Kelso-Cima roads by reducing the turning radius for the north bound right turn. This would provide more space on the west side of the depot for parking and landscaping. Parking would be confined to the NPS property, north of the depot.

INTERPRETATION

The comfort station and unstaffed interpretive building would be located on NPS property. The National Park Service would only address restoration or treatment of historic buildings that are located on NPS property. The National Park Service would seek to develop formal agreements with private property owners where historic structures or features exist at Kelso with the intent of possibly including these features in an interpretive plan. The National Park Service would consider cooperating with Union Pacific on an outdoor railroad exhibit area as described in the proposed action but the location is unknown.

FLOOD MITIGATION

The dike north of the depot would not be filled, but warning systems and dike protection as described in the proposed action would be used.

CONCEPT "B"

This concept is the same as proposed action with the following changes.

Refer to Concept "B" drawing for the Kelso property and drawings #3 and #4 for options for accessing to the depot with the dike closed.

This concept is created around the assumption that all new development would be limited to existing NPS property. The dike located north of the depot would be filled in to increase the degree of flood protection for the depot and Union Pacific housing area. This would require the rerouting of the Kelbaker road as shown on drawings #1 and #2.

ROADS AND PARKING

The current road system would be drastically changed because of the filling in of the existing dike where the Kelbaker Road cuts through it. To keep the traffic flowing on the Kelbaker and the Kelso-Cima Roads and to avoid breaking of trains in the middle of the siding, a new railroad crossing would need to be built along with a new highway that would tie these elements together. This action would be taken to resolve the current conflict between highway traffic and trains that block the highway crossing and the pedestrian that walk onto the tracks. The existing portion of Cima road to the depot would become a dead end road with the ability for traffic to turn around and return.

LANDSCAPING

Same as the proposed action with less area for landscaping.

INTERPRETATION AND INFORMATION

The comfort station and unstaffed interpretive building would be located on NPS property. The National Park Service would only address restoration or treatment of historic buildings that are located on NPS property. The National Park Service would seek to develop formal agreements with private property owners where historic structures or features exist at Kelso with the intent of possibly including these features in an interpretive plan. The National Park Service would consider cooperation with Union Pacific on an outdoor railroad exhibit area as described in the proposed action but the location is unknown.

CONCEPT "C"

Same as the proposed action with the following differences. (There is no drawing for this alternative)

This concept assumes that the National Park Service would be able to purchase private property from willing sellers as described in the proposed action and the road system would be changed.

ROADS AND PARKING

The existing road system would be changed as proposed in Concept "B." The National Park Service would develop parking as shown on the proposed action drawing.

FLOOD MITIGATION

Same as Concept "B."

ALTERNATIVE ROAD ALIGNMENTS CONSIDERED

Both alternatives try to get the railroad crossing on a point on the tracks where there would less chance for train traffic to block the road for long periods of time.

MOVING THE ROAD TO THE EAST (DRAWING #1)

A new road south of the tracks would need to be taken far enough to avoid the private property in this area. At this time, this does not appear to be a problem. The crossing would only have to go over one or two sets of tracks, reducing costs. Crossing arms would be installed at the new crossing. Wilderness boundaries may limit some options.

MOVING THE ROAD TO THE WEST (DRAWING #2)

A new road would approximately follow an abandoned road that is located on the south side of the tracks. The Kelbaker intersection on the north of the dike would become a 4-way intersection with a road down to the dike to allow continued access to the private property (RV park). If the private property owner decides to sell, the intersection could become a 3-way intersection. Access to the depot would be from the east off of the Kelso-Cima Road.

CONCEPT CONSIDERED BUT REJECTED

Place the Kelbaker Road in a tunnel under the existing railroad crossing. This alternative would be very costly and require that the Kelbaker Road and Kelso-Cima Road intersection be relocated north of the dike to allow for grade transition into the tunnel from the intersection. Flash flooding could potentially close the tunnel during storms.

APPENDIX B-1: FLOODPLAIN STATEMENT OF FINDINGS

The National Park Service owns the historic Kelso Depot. The depot is one of the significant cultural resources within Mojave National Preserve. Construction on the building was completed in 1925 and served the Union Pacific Railroad by providing housing and meals to employees and meals to the public until it was closed and abandoned in 1985. The architectural integrity of this 2-story building remains relatively intact. The depot contains approximately 11,600 square feet. The depot sets within the town of Kelso that is located within the heart of the preserve. Kelso contains remnants of other historic structures and a few modern structures that house an estimated 30 residents. The depot property is located just south and east of the junction of the Kelbaker Road and Kelso-Cima roads and north of the Union Pacific railroad tracks.

The Draft General Management plan for Mojave National Preserve is recommending that this building be restored to its period of historic significance and adaptively used as a major museum and interpretive facility for Mojave National Preserve. The National Park Service completed a historic structure report in 1998 for the Kelso Depot that provides an analysis of requirements for treatment of a historic resource for preservation and use.

JUSTIFICATION

Because of the historic significance of the Kelso Depot, the National Park Service has requested funding to stabilized and protect this building from further deterioration. Public comments and scoping meetings held during the general management planning process were overwhelmingly in support for restoration of and pubic use of the depot. The public interest and opportunities for interpreting this historic structure and cultural landscape are high. The San Bernardino County Board of Supervisors formally passed a resolution on February 24, 1998, recommending that the U.S. Department of the Interior fund the stabilization and restoration of the Kelso Depot.

The depot sets at a prime location to contact visitors by being located next to a highway junction that receives visitor traffic from four out of the six major highway entrances. A visitor study conducted in April 1997, and traffic counter data from 1997, indicated that an estimated 90% of all visitors who enter Mojave National Preserve, pass through this highway junction. The depot is about 250 feet from the junction and very visible to travelers. The preserve has over 1.6 million acres with six primary highway entrances. Locating the visitor center next to the railroad could provide options for an alternative mode of transportation for visitors coming to the preserve.

Section 512 of the California Desert Protection Act of 1994, calls for the general management plan to “evaluate the feasibility of using the Kelso Depot and existing railroad corridor to provide public access to and a facility for special interpretive, educational, and scientific programs within the preserve.” The planning effort has evaluated the feasibility of using the depot as a visitor contact center and museum. This proposal is justified by a strong need to restore, protect and interpret this historic structure. This need is driven by strong support from the general public and local county government. The depot is also an excellent location from which to contact visitors. We believe that the combination of these factors provides strong justification for creating a visitor facility within a floodplain, despite the potential threat of flooding. We also believe that the application of recommended mitigation measures can substantially reduce the threat to life or government property.

INVESTIGATION OF ALTERNATIVE SITES

Alternative locations for a visitor contact facilities within the preserve include: land south of Baker California along the Kelbaker Road, land south of the Nipton road junction on Ivanpah Road, and north of interstate highway 40 on Kelbaker Road. Each location would require construction on previously undisturbed ground and the extension of power and telephone lines for a least 1-mile to each site. This would create a visual intrusion on each open landscape that presently may only have visual intrusions such as the road, a barbed wire fence, or cattle corral to distract from the scenery. Each alternative location would only capture up to 33% of the total, current, traffic flow and require many visitors to drive for over 1 hour to reach the visitor center from the other entrances. There is the possibility of leasing a building within the town of Baker for use as a visitor contact facility. The advantages of this location include the potential for a high number of people that may be attracted off of interstate 15 traffic. There are also easily available public utilities and lower impact on land than may occur at alternative sites. The disadvantages of a Baker site include the fact that it would be off the main flow of visitor traffic and many people may not make the effort to travel to Baker to get information on the preserve. In 1997 and 1998, visitation data indicate that the natural and cultural features within the preserve are stronger attractions to visitors than the existing visitor information center in Baker. This situation occurs, despite the fact that the center is frequently advertised on a local radio station.

DESCRIPTION OF SITE SPECIFIC FLOOD RISK

The National Park Service Water Resources Division conducted a floodplain study for the Kelso Depot during the spring of 1998. Results of the study indicate that the elevation of the 100-year flood is below the existing levee elevation. However, the existing levee does not provide adequate long-term protection due to its fine-grained, non -reinforced material, which will undoubtedly fail when subjected to prolonged flooding. With no levee protection, the basement of the depot could be expected to receive water on the average of about every five years. Furthermore, flooding of the first floor could be expected about every ten years. The 100-year flood could subject an unprotected depot to several feet of inundation with associated velocities in excess of 10 fps. This scenario should be considered very hazardous and appropriate mitigation should be implemented. If the levee were to partially fail upstream of the depot, flood waters could access the Kelso-Cima road, and discharge would be contained between the remaining portion of the levee and the railroad grade, putting the depot in the direct path of the flood. Modeling results indicate that during this scenario, it would require only about 10-20 percent of the 100-year flood to reach the foundation of the depot. Associated velocities would likely exceed 5 feet per second, and should be considered hazardous.

In summary, flood hazard at the site of the Kelso Depot ranges from fairly frequent nuisance water to infrequent, but potentially devastating floods. Consequently, occupation of this site will require appropriate mitigation.

MITIGATION OF POTENTIAL FLOOD HAZARDS

Flood protection would be provided for the property by reinforcing and repairing the existing levee to contain the 100-year flood. This levee would have a height at least 9.3 feet above the channel bottom. This configuration would contain the predicted 100-year flood elevations and provide an average of 2 feet of freeboard. In addition to the design height, the levee would be armored at critical points with material large enough to withstand velocities of 12–13 feet per second. Other sections

would be repaired and thickened with local material to increase the level of protection. A levee maintenance program would be established.

A warning and evacuation plan would also be implemented to protect human life in the case of extreme floods. Flood warning would occur by developing communication with the National Weather Service in the area and requesting that they notify the park during extreme storm events. In the case of an extreme storm, park visitors and employees would evacuate the Kelso Depot via the Kelso-Cima road.

SUMMARY

There are several factors that contribute to the need to protect and use the Kelso Depot. The Kelso depot is one of the significant cultural resources found within Mojave National Preserve and needs to be protected from potential threats. The depot's location along an active railroad line and a primary highway make it an ideal location from which to provide the public with information and interpretive services. Despite the continued threat of flooding, it is believed that the depot and human life can be protected by implementing a combination of proposed and other mitigating actions. The levee would be rebuilt and protected at sections where water flows have significantly cut into the levee. Other sections of the levee would be repaired as needed with fill material to increase or maintain the desired thickness and height of the levee. The storm channel located adjacent to the north side of the levee, would be improved and maintained to reduce the potential for impact to the base of the levee from small flows. The levee would be inspected on an annual or more frequent basis, depending upon the intensity and frequency of storms to determine appropriate maintenance work needed to maintain the levee. Using available technology, a communication link would be established with the National Weather Service to establish provide an early warning system for staff and visitors at the depot.

It is recognized that a threat to live and property exists as a result of the location of the depot within a flood plain, but that the threat can be mitigated by taking appropriate actions. It is proposed that the depot be occupied and used for visitor and NPS administrative functions, and that initial and continuing mitigating efforts be taken to protect life and property.

Figure B-1. Proposed Action Drawing for Kelso Depot

Figure B-2. Concept "A" for Kelso Depot

Figure B-3. Concept “B” for Kelso Depot

Figure B-4. Drawing #1 East Crossing

Figure B-5. Drawing #2 West Crossing